consisting of copper, copper/nickel, copper/titanium, and copper/nickel/titanium, wherein the Cu-based alloy foil is produced by a plating process;

a separator interposed between the positive and negative electrodes; and

an electrolyte into which the positive and negative electrodes and the separator are immersed.

2. (Twice Amended) The lithium secondary battery of claim 1 wherein an amount of nickel is 0.8 to 4 wt% of copper, an amount of titanium is 0.2 to 4 wt% of copper, an amount of magnesium is 0.05 to 0.6 wt% of copper, an amount of tin is 0.1 to 2.0 wt% of copper, an amount of boron is 0.0005 to 5.0 wt% of copper, an amount of chromium is 0.0005 to 0.5 wt% of copper, an amount of manganese is 0.1 to 1.0 wt% of copper, an amount of cobalt is 0.01 to 2.0 wt% of copper, an amount of vanadium is 0.0005 to 0.5 wt% of copper, an amount of zirconium is 0.0005 to 0.5 wt% of copper, an amount of niobium is 0.0005 to 0.5 wt% of copper, an amount of bismuth is 0.0005 to 0.5 wt% of copper, an amount of lead is 0.0005 to 0.5 wt% of copper, and an amount of silver is 0.0005 to 0.5 wt% of copper.

3. (Three Times Amended) A method for making a lithium secondary battery comprising:

forming a positive electrode by coating a lithium metal oxide on a positive current collector;

forming a negative electrode by coating carbonaceous materials or SnO_2 on a negative current collector, where the negative current collector is made of a Cu-based alloy foil with a thickness of 20 μm or less and the Cu-based alloy foil comprises at least one material selected from the group consisting of magnesium, tin, boron, chromium, manganese, cobalt, vanadium, zirconium, niobium, bismuth, lead, silver, and misch metal and further comprises a copper-based material selected from the group consisting of copper, copper/nickel, copper/titanium, and copper/nickel/titanium, wherein the Cu-based alloy foil is produced by a plating process;

interposing a separator between the positive and negative electrodes; and

injecting an electrolyte to immerse the positive and negative electrodes and the separator.